

### **REMARKS**

The Examiner is thanked for providing a copy of the Provisional Application 60/315,900, as requested by Applicants' Attorney in a telephone conference with the Examiner on February 15, 2006. In this Response, claims 1 and 8 are amended. Claims 15-17 are added. No new matter is introduced by the new claims. No claim is canceled. Accordingly, claims 1-17 are pending in the present application. Applicants respectfully request reconsideration of the application in view of the above amendments and remarks made herein.

#### **I. Rejections Under 35 U.S.C. § 102**

Claims 1-14 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0046572 to *Newman et al.* (hereinafter "*Newman*"), for the reasons set forth on pages 4-6 of the Final Office Action.

With respect to claims 1 and 8, Applicants respectfully submit that *Newman* does not anticipate these claims because *Newman* does not disclose "internally encrypting said working encryption key within a database engine using a public key from an authorized user; ... and internally encrypting said data within said database engine using said working key", as in claims 1 and 8, as amended.

Applicants' specification provides in relevant part: "[t]he approach of the invention is to add *encryption as an internal database feature* so that data can be stored in encrypted form and can also be processed efficiently and securely. ... Because efficient *database techniques such as indexes and query optimization are integrated together with the encryption function*, the efficiency of the RDBMS remains available to the user,"

paragraph 26, Pub. No. 2003/0123671 (emphasis added). As stated in the Background of the Invention section of Applicants' specification, several database products support weak data encryption, all of which use loose coupling—i.e., data are first encrypted *outside* the database engine and then loaded into the database. Applicants respectfully note that *Newman's* system is an example of the loose coupling approach.

*Newman* discloses in paragraph 21: "the invention comprises two major components. First, the invention comprises a low-level API, which functions as a shell, providing cryptographic algorithms for Procedural Language/Structured Query Language (PL/SQL) developers. Second, the invention comprises a key management system which utilizes the low-level API to provide a turnkey solution to automatically and transparently encrypt data in columns and rows." Therefore, *Newman* provides *encryption service to end users via add-on APIs*. In contrast, the present invention provides *encryption as an internal database server core feature*.

Applicants respectfully submit that, since *Newman* provides *encryption service to end users via add-on APIs*, and because it does not teach or suggest providing encryption as an internal database server core feature, *Newman* does not teach or suggest "internally encrypting said working encryption key within a database engine using a public key from an authorized user; ... and internally encrypting said data within said database engine using said working key", as in claims 1 and 8, as amended. Therefore, for at least the above-stated reasons, *Newman* does not anticipate claims 1 and 8. Withdrawal of the instant rejections is respectfully requested.

Moreover, Applicants submit that inasmuch as claims 2-7 are dependent on claim 1 and claims 9-14 are dependent on claim 8, and claims 1 and 8 are patentable

over *Newman*, claims 2-7 and 9-14 are patentable as dependent on patentable independent claims. Withdrawal of the instant rejections is respectfully requested.

Withdrawal of the rejections under 35 U.S.C. § 102(e) is respectfully requested.

## II. New Claims

Applicants respectfully submit that new claims 15 and 16 are patentable over the cited reference for at least the reason that *Newman* does not teach or suggest "writing the encrypted data into a database disk page, after the step of internally encrypting said data within said database engine using said working key", as in claims 15 and 16. In addition, Applicants respectfully submit that new claim 17 is patentable over *Newman* for at least the reason that *Newman* does not teach or suggest "decrypting the data to form plaintext data pages; using said plaintext data pages, building an index and forming index pages; and encrypting said index pages", as in claim 17.

**CONCLUSION**

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance. Issuance of a Notice of Allowance is respectfully requested.

Respectfully submitted,

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